



GIS Excellence Awards

November, 17th 2004



The GIS Excellence Awards were created in order to celebrate and recognize those County employees and agencies which are using GIS technology.

This year 41 projects were submitted for one of the twelve awards given annually. These submissions represent work from over 50 employees in 10 different County agencies. Even these numbers fail to appreciate the investment that agencies have placed into GIS. This year as a result of County initiatives, 261 new data layers have been created or acquired, 625 employees were trained in GIS, and over 1.5 million map images have been served through the Fairfax County website.

These advancements have led to the work that you see posted in the hallways, on display by the exhibitors, and honored through the GIS Excellence Awards.

The awards are divided into four categories:

- Cartographic Use of GIS
- Use of GIS by an Individual
- Use of GIS by a Group or Team
- Use of GIS by an Agency

Awards were determined by a judging panel which included representatives from the Department of Management and Budget, the Office of the County Executive, George Mason University Department of Geography, and ESRI.

Cartographic Use of GIS Awardees

RPPD Sign Maintenance Inventory

Paul Mounier

Department of Transportation

This map product provides a complete documentation of the location and condition of all signs within the Fairfax County RPPD program. The maps created allow staff to create a sign maintenance plan for specific districts.

South County Bus Inventory

Tony Foisy

Department of Transportation

This map was created to assist the Fairfax Connector staff in planning for the South County System bus routing changes. Transit planners used this graphic to visualize bus stop locations in the area, better determine bus stop voids and spacing, and provides customers with a way to make decisions about which bus stop to use.

Emerald Ash Borer Eradication Project

Frank Finch

Department of Public Works and Environmental Services

Emerald Ash Borer (EAB) is extremely damaging to forest and residential ash trees. These map products were used by DPWES-Forest Pest Section to identify ash trees within an EAB infestation zone, notify impacted landowners, identify tree removal locations, and to verify tree removal had been completed.

Use of GIS by an Individual Awardees

Using GIS to Perform Pipe Flow Analysis

Lana Tran

Department of Public Works and Environmental Services

Determining flow rates of sanitary sewer lines has traditionally been a painstaking task involving manual manipulation of the existing data; including tracing sewer lines and calculating water consumption data to determine flow rates.

GIS processes can replace much of the work that was previously done manually. Incorporating GIS now saves between 80-90% of the project time through minimizing data collection, gathering, and extraction.

Testing the Effectiveness of Predictive Analysis Methods in a Crime Series

Daphne Sawyer

Fairfax County Police Department

In order to determine the effectiveness of two predictive analysis methods for crime series investigations, an analysis was undertaken on a closed case. The analysis allowed for the FCPD to determine which method works best for Fairfax County; potentially reducing the number of officers needed for operations, reducing the length of the crime series, leading to swifter arrests in investigations.

Fairfax County Revitalization Web Site and CD-ROM

Myah Evers-Schwartz

Department of Housing and Community Development

The Fairfax County Revitalization Web Site was launched in September, 2004. The website incorporates maps and data assembled from GIS. GIS was integral in making the web launch successful. Maps, images, and data have all been assembled to deliver information that is easy to understand and use for citizens and staff.

Since the launch, almost 25,000 pages have been downloaded and 800 stand-alone CDs containing the website information have been distributed. You may view this resource at;

<http://www.fcrevit.org/>.

Use of GIS by a Group or Team Awardees

Draft Chesapeake Bay Supplement to Fairfax County's Policy Plan

Noel Kaplan, Mary Ann Welton, Pam Nee, Harry Rado, Mike Donnelly, Mike Liddle

Department of Planning and Zoning

The development of the draft Chesapeake Bay Supplement to the County's Policy Plan required the preparation and presentation of a series of maps presenting a wide range of information addressing water quality issues in Fairfax County. In all, thirty maps were prepared for this effort, with all of the maps developed through GIS. It is unlikely that this project could have been prepared without using GIS cartographic methods.

Greenspring Village – Geographic Distribution of Employees

Lisa DuMetz, Walter Daniel, Arpita Chatterjee, Keith Appler, Tony Foisy

Department of Transportation

The Fairfax County Employer Services Program helps major employers find transportation alternatives that will make companies more successful, improve the economic vitality, and improve quality of life for the region. GIS provided an excellent way to visualize the geographic distribution of employees and their relationship to surrounding transit features within the region allowing over 800 employees to make more informed transportation decisions.

Enhanced GIS-based Fairfax County Transportation Plan Map

Arpita Chatterjee, in coordination with the Department of Transportation and Department of Planning and Zoning

The Transportation Plan Map had not been amended since October, 2001 while the Comprehensive Plan had been updated frequently, most recently in 2003. These changes had not been reflected in the Transportation Plan Map, nor were the detailed transportation recommendation maps contained within the Comprehensive Plan consistent with the Comprehensive Plan text and Transportation Plan Map.

Updating the Transportation Plan Map, and creating the document digitally using GIS, has allowed for easier updates in the future, possible distribution over the web, and simplifies the communication of transportation recommendations to citizens and staff.

Use of GIS by an Agency Awardees

Department of Community and Recreation Services

To DCRS, CSB, and DSMHS for their interagency cooperation and coordination on the project - **GIS Helps Fastran Manage Demand**. This was an outstanding example of various groups and departments working together with GIS to deliver better and more cost-effective services to our constituents.

Department of Planning and Zoning

DPZ's overall submissions demonstrated the breadth of GIS usage within the agency. DPZ continues to demonstrate outstanding and increasing GIS usage. Their projects this year included GIS usage for Chesapeake Bay shoreline inventory, 3D visualization of planned land use changes, underutilized land and county land use categorization.

Fairfax County Department of Transportation

The overall submissions to the Excellence Awards this year by the Department of Transportation demonstrate the breadth and depth of GIS usage within as well as the clear support of GIS by the agency. They submitted a large number of projects that ranged from a countywide transportation plan project, using GPS for travel times, regional bus inventories, as well as assisting employers to optimize transportation options for their staff.

Complete Listing of GIS Excellence Award Submissions

Cartographic Use of GIS

Bus Stop Inventory & Route map – Tony Foisy, FCDOT
Credit Card Thefts - Melissa Carboni, FCPD
Emerald Ash Borer Eradication Project - Frank Finch, DPWES – Forest Pest
Existing Land Use - Mubarika Shah, DPZ
Gypsy Moth Adult Traps - Jack Baggett, DPWES – Forest Pest
Herndon-Monroe & Vienna-GMU Park-n-Ride Facilities - Keith Appler, FCDOT
Holmes Run Residential Burglary Series - Emily Yance-Houser, FCPD
Improving Mobility in the 21st Century - Lisa Johnson & Carl Winstead, FCDOT
Laurel Hill Photographic View - Mike Donnelly & Charlene Fuhrmann-Schultz, DPZ
Mt. Vernon District Armed Street Robberies - Erin Reilly, FCPD
Park-n-Ride Facilities – Tony Foisy, FCDOT
RPPD Sign Maintenance Inventory - Paul Mounier, FCDOT
Shoreline Tidal Inventory - Mike Donnelly & Mary Ann Welton, DPZ
South County Bus Inventory - Tony Foisy, FCDOT
Vacant / Underutilized Private Land - Mike Donnelly, Noel Kaplan & Indrani Sistla, DPZ
Zoning Enforcement Areas - Marsha Collins, Mike Donnelly, Harry Rado & Roger Sims, DPZ

GIS Use by an Individual

“ACE” Graffiti Next Hit Probability - Simone Englehardt-Greer, FCPD
Altaris CAD Data Preparation - Ralph Dulaney, Fire & Rescue
Automobile Tampering / Larceny - Camie King, FCPD
BRT Ridership Analysis - Tony Foisy, FCDOT
CPD Petition Area Maps - Paul Mounier, FCDOT
Cut Telephone Line Burglaries - Angela Aufmuth, FCPD
Fairfax County Revitalization Website - Myah Evers Schwartz, DHCD
FCDOT Direction Maps – Tony Foisy, FCDOT
HAZMAT & Investigative Services - Wayne Trice Burgess, F&R
Multiple Stormwater Facilities on a Commercial Property - Phil Miley, DPWES – MSM
Testing the Effectiveness of Predictive Analysis Methods - Daphne Sawyer, FCPD
Using GIS to Perform Pipe Flow Analysis - Lana Tran, DPWES – Wastewater Planning
Wallet Inspectors Crime Series - Jessica Beaty, FCPD

GIS Use by a Group or Team

Chesapeake Bay Supplement - Mike Donnelly, Mike Liddle, Noel Kaplan, Pam Nee, Harry Rado & Mary Ann Welton: DPZ
GIS Helps FASTRAN Manage Demand - Michael Artson, Connie Mills & Steve Yaffe: FASTRAN-DCRS
Dennis Brown & Kim Wilks-Sibert: CSB-MR Services
Lathan Dennis: DHMHS
GPS Travel Time Study - Keith Appler, Arpita Chatterjee, Tony Foisy & David Kline: FCDOT
Green Infrastructure - Kirk Holley: FCPA
Greenspring Village - Lisa DuMetz, Walter Daniel, Arpita Chatterjee, Keith Appler, Tony Foisy: FCDOT
Park-n-Ride Mapping on the Web - Keith Appler, Tony Foisy, Esther Forbes, Beth Francis & Caijun Luo: FCDOT
Stream Condition Index - Chad Grupe, Dipmani Kumar & Matt Meyers: DPWES – SWM
Traffic Operations Asset Inventory – Tony Foisy: FCDOT
Transportation Plan Map – Arpita Chatterjee: FCDOT

GIS Use by an Agency

3-D Visualizations of Planned Land Use changes – Charlene Fuhrmann-Schultz, Mike Liddle: DPZ
Fairfax County AEOC – Kisha McKenzie: Emergency Management
GIS in FCDOT – 2004 – Tony Foisy: FCDOT